

Characteristics and chemical treatment of expansive clay in Al- Qatif, Saudi Arabia

Abduljawad, S.N.
Engineering Geology
Vol. 31, Issue.2, 1991

Abstract: Documented evidence of the existence of expansive clays in the Al-Qatif area in the Eastern Province of Saudi Arabia is presented and problems associated with it are described. A site investigation was conducted to obtain undisturbed block clay samples. Laboratory tests were used to determine geotechnical properties, mineralogical composition and swelling characteristics. A laboratory evaluation of chemical stabilization was carried out using three types of chemicals. The results indicate that Al-Qatif clays can be characterized as highly expansive and commercial limes are recommended for preconstruction.